The Urban Cultivator Commercial

User Manual

Urban Cultivator™

Please read the information inside this Instruction Booklet carefully and keep it as a reference manual.

These symbols are used to highlight important information:

Warnings

Information and best practices

Environmental information

If you are unclear about any aspect of information in this manual please contact Urban Cultivator using support@urbancultivator.net or telephone our toll free number 1-877-352-0490, available seven days a week.

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Technical Specifications

Exterior Finish: Powdercoated white

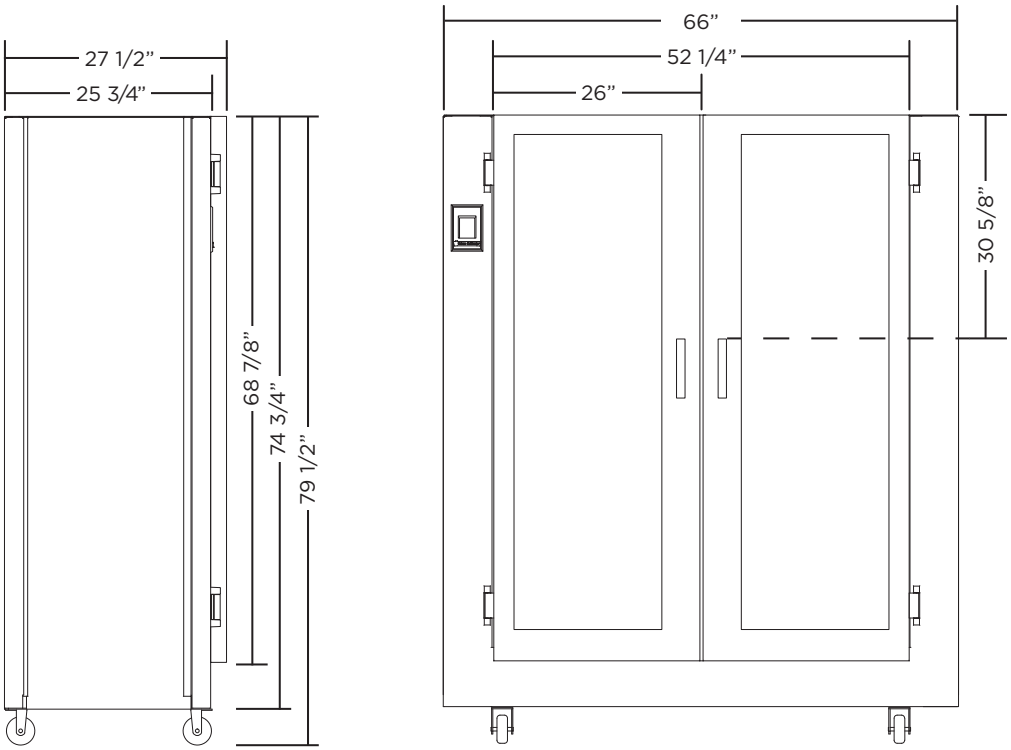
Temperature Control: Based on room temperature (no compressor)

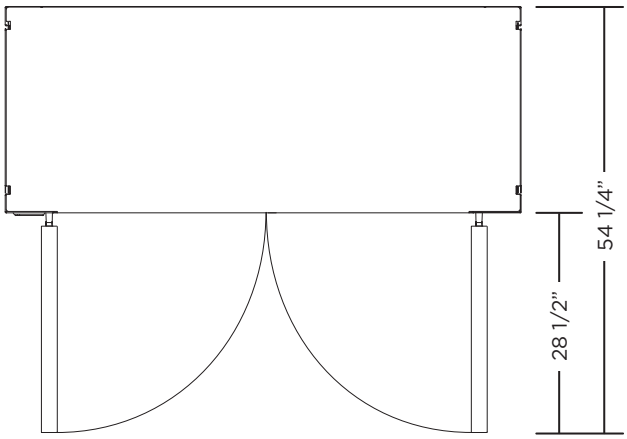
Weight: 545 lbs

Growing Capacity: 16 flats

Plumbing requirements: 1/4” MPT fittings

Electrical requirements: Grounded 110v wall plug (15 Amp Breaker)





Safety Precautions

Urban Cultivator cares about your safety and your plants. We want you to be familiar with the following safety instructions.

This manual should remain with the Urban Cultivator Commercial appliance so that new owners may learn about the product and relevant safety precautions.

You must carefully read through this instruction manual before installing and using the Urban Cultivator Commercial.

If you are unclear about any aspect of information within please contact Urban Cultivator using support@urbancultivator.net or telephone our toll free number 1-877-352-0490 available seven days a week.

Child safety

- This appliance is designed to be operated by adults.
- The water from your Urban Cultivator Commercial is not for drinking.
- Keep your Seeds, Nutrients and Growing Mediums in a safe, dry storage area.

The Cultivator's control panel has a child safety lock. Refer to the Control Panel Table for more information.

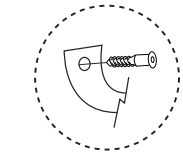
Safety precautions in daily use

Contaminated items and/or garbage must not be present in the appliance

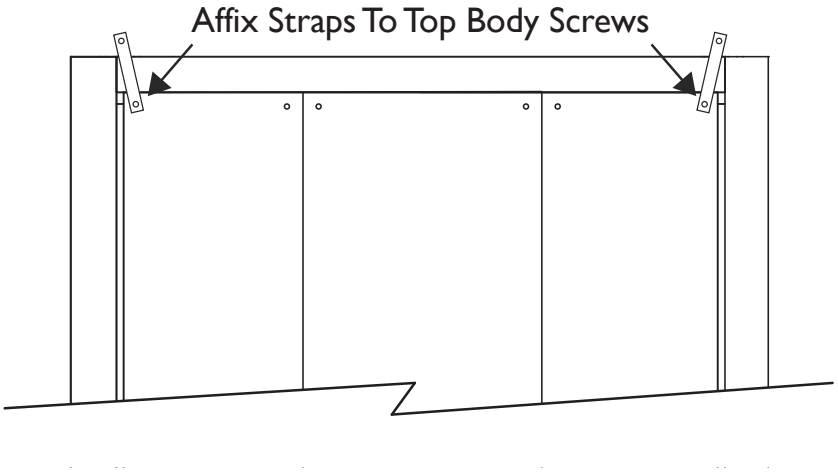
- Keep the door closed when not working with the Cultivator.
- Do not remove the grow drawers when the machine is watering. Refer to the Control Panel table for instructions on controlling the watering & lighting schedules.
- Only use products that have been designed to be used with the Urban Cultivator Commercial.
- Do not sit or stand on the open door or grow drawers.
- Always unplug the power cord from the outlet and disconnect the water mains when the Cultivator is not in use. The pH sensor has to be placed back into its case with storage solution when not in use.
- The Urban Cultivator Commercial should be serviced by a licensed professional.
- Use genuine spare parts and supplies that have been provided by Urban Cultivator.
- Any attempts to fix the Urban Cultivator Commercial without an authorised professional can be dangerous and will void your warranty.
- Do not place any items on top of the Urban Cultivator Commercial.
- Be careful when removing the grow drawers as they can weight up to 100 pounds when fully loaded with soil, plants and water.
- When moving your Cultivator, ensure there is no water inside the reservoir. Extra water may cause level issues if left in the Cultivator while being moved.

⚠ Whenever you take a grow drawer out be careful of standing water. It can take up to ten minutes for the grow drawer to drain after a watering cycle.

The Cultivator may tip dangerously forward when removing fully loaded grow drawers from the top two levels. The Reservoir should be full with water to avoid this potential tipping hazard. Please secure the Cultivator to the building structure using the strap and fixing provided. See below.



Attach To Wall



TIP OVER HAZARD

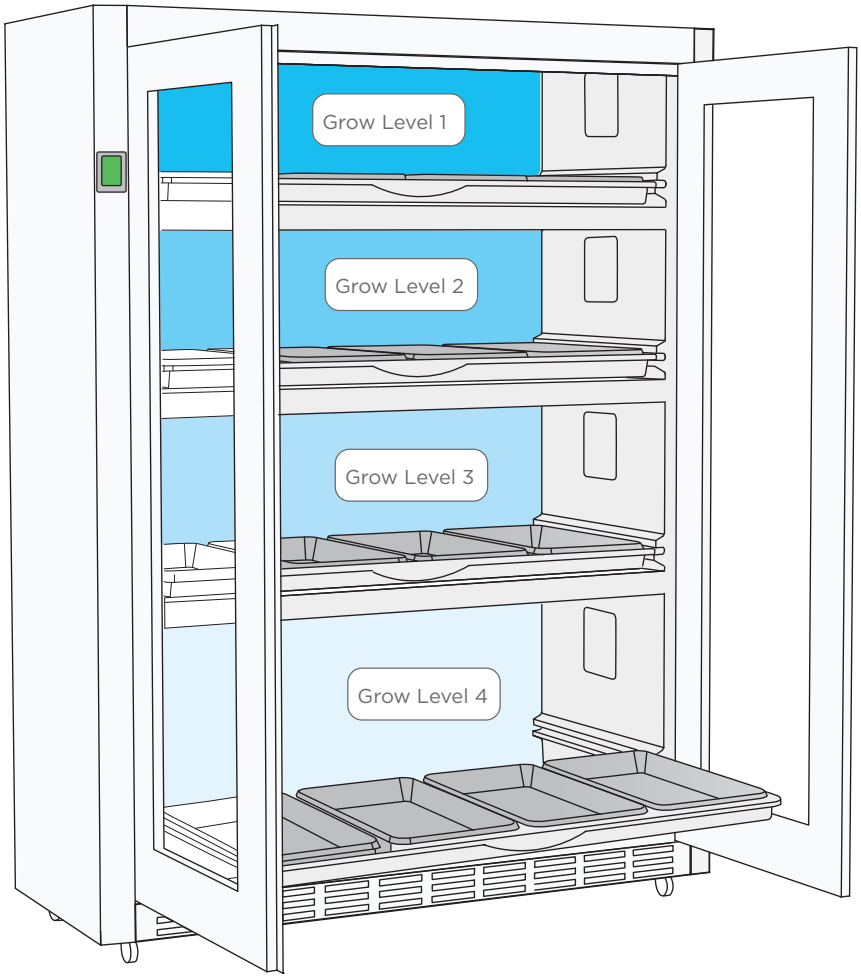
WARNING
The Cultivator could tip dangerously forward.

Do not use the Cultivator until it is fully installed.

How the Cultivator Works

The Urban Cultivator Commercial provides a self-contained growing environment for herbs and greens. Lights imitate the sun's rays and an irrigation system delivers water and nutrients from the reservoir to the plants. The automated system provides everything for the plants at the correct times and measures so that your herbs and greens grow all year round.

We have pre-programmed the Cultivator for an average growing situation, but you can customize to fit your environment. Please call us or visit our website for more details.



Every 4 Days
The default watering cycle

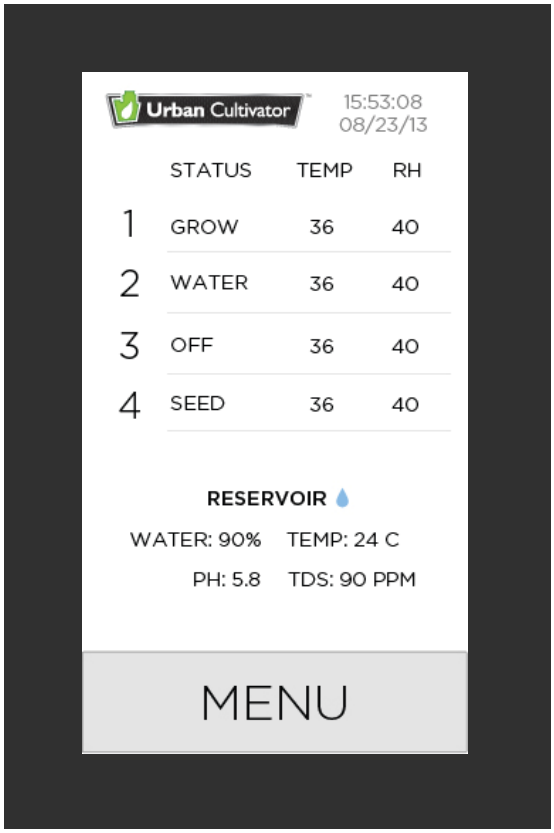
10 Minutes
The Default Watering Time

8:00am
The Default Lights ON Time

18 Hours
How Long The Lights Stay On Per Day

Touch screen

The liquid crystal touch screen enables you to control the Cultivator's functions and allows the Cultivator to communicate watering, lighting, temperature, relative humidity and nutrient data back to you. Below is an illustration of the status screen of the program.



Password protection

The main menu is password protected. If you've forgotten your password, you may also use the master password: 1821

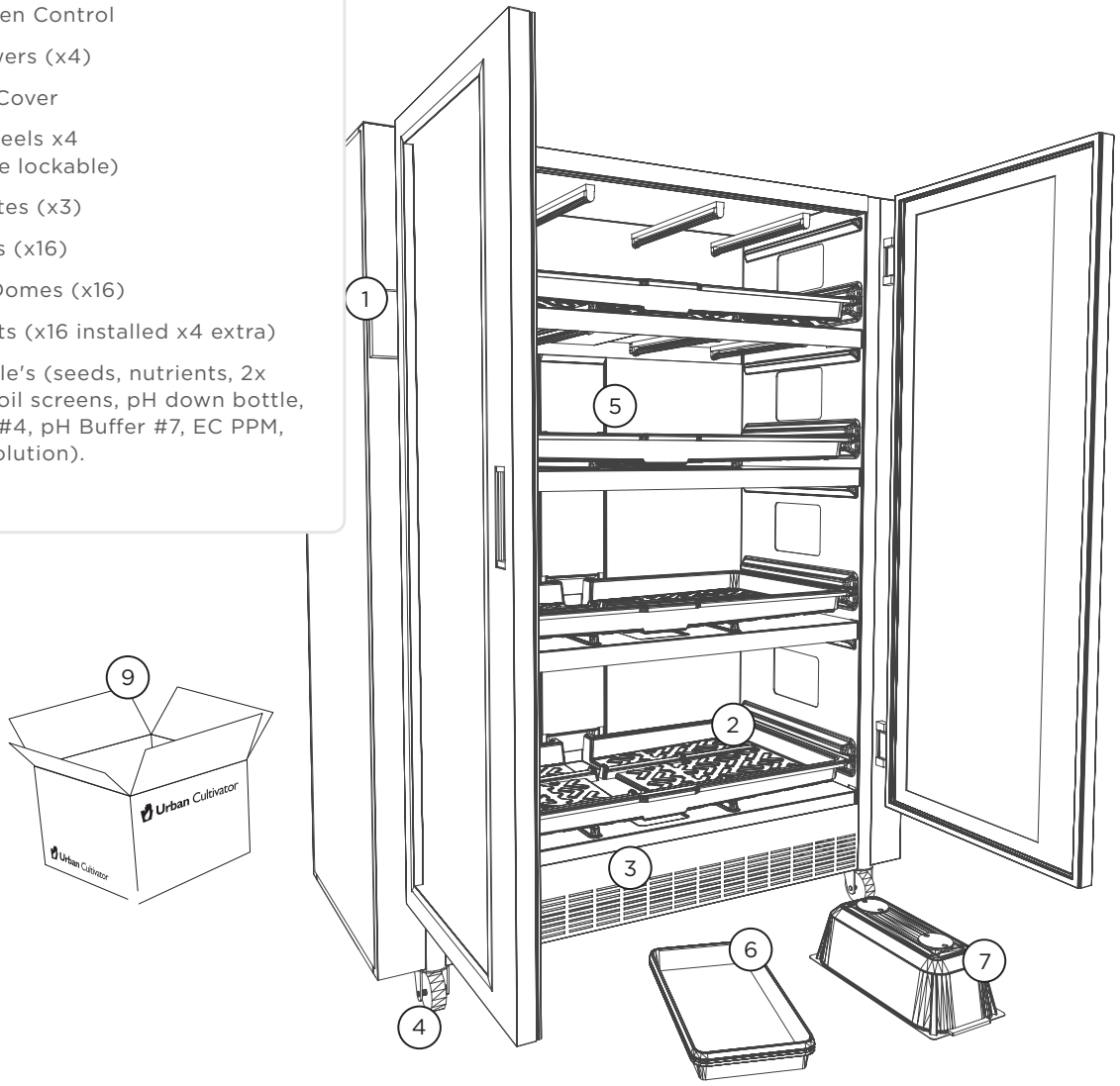
Before You Install...

Hardware and accessory check list

Please check that all the components for your Urban Cultivator Commercial are accounted for and that none have been damaged in shipping. Please refer to the Checklist provided.

Component Names

1. Touch Screen Control
2. Grow Drawers (x4)
3. Reservoir Cover
4. Castor Wheels x4
   (front 2 are lockable)
5. Splash Plates (x3)
6. Grow Trays (x16)
7. Humidity Domes (x16)
8. Grow Lights (x16 installed x4 extra)
9. Consumable's (seeds, nutrients, 2x packs of soil screens, pH down bottle, pH Buffer #4, pH Buffer #7, EC PPM, Storage Solution).



Check the unit for any shipping damage. Never connect or start growing with a damaged machine. Please contact us if your Urban Cultivator Commercial is damaged.

Give your cultivator ample space

All plumbing and electrical work should be done by a certified professional. To successfully install the Cultivator you need to:

- Position the Cultivator on level ground so that the water inside flows evenly and lock the front two castor wheel brakes so the unit doesn't move when the doors and grow drawers are operated.
- Leave at least 36 inches at the front of the Cultivator for the doors, drawers and yourself.
- Allow at least a 12-inch ventilation gap from the top of the Cultivator to the ceiling.
- Connect the city water supply and city drain to the 1/4-inch NPT female fittings at the back left of the Cultivator. See the photograph below.
- City water connection **must not be further than 10 feet from the Urban Cultivator Commercial** and no higher than 6 feet from the Urban Cultivator Commercial connections.
- The 120V (240V outside of North America) electrical outlet should be within 6 feet from the Cultivator.

Pipes that have not been in regular use should be cleaned with running water before connecting the Urban Cultivator Commercial.

Make sure that the water inlet hose is not twisted, crushed, entangled or leaking in any way. Do not use connection hoses that have been used previously by other appliances.

City Drain Connection
1/4" NPT female fitting

City Fill Connection
1/4" NPT female fitting

TIP OVER HAZARD

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Electrical connection

The Urban Cultivator Commercial must be grounded (i.e. connected to the earth). Urban Cultivator does not accept any responsibilty should this safety measure not be followed.

Electricity can be dangerous and an unsafe plug inserted into a power socket could result in a serious safety hazard. Do not connect the Urban Cultivator Commercial via an extension cable.

Ensure that the plug is accessible after the Cultivator has been installed.

Running the Cultivator for the First Time

Note: the appliance must be plugged in and plumbed by a professional.
Follow the steps below to setup your Cultivator for the first time. The MENU Password is **1821**.

1. Set up the clock

- Press MENU, >, then OPTION. Set your “Date”, “Time” and “Format”.
- Press SAVE and return to the setup menu.

Ensure water lines are hooked up first (see page 9)

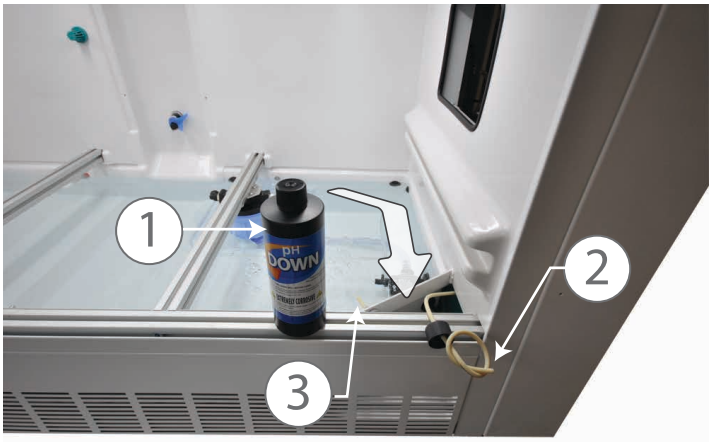
2. Fill the reservoir

- Remove the lower grow drawer and reservoir cover to access the pH Bottle Shelf.
- Press MENU, SET RESERVOIR, Stand Alone Mode and Change To City to switch to city water mode.
- Press FILL and check to make sure the water is filling into the reservoir.
- Once full, the Cultivators onboard computer will maintain a constant water level.

Ensure reservoir is free of dirt and foreign objects before filling.

3. Set up the pH doser

- Remove the lower grow drawer and reservoir cover to access the pH Bottle Shelf.
- Place the pH Down bottle (#1) into the shelf (see arrow below) replacing its bottle cap with the one fixed to the Cultivator with a hose (#2).



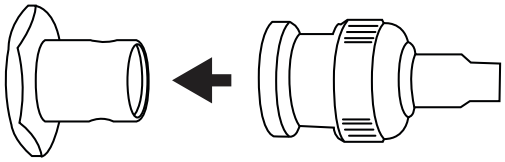
1. pH Down Bottle. Remove the Cap and place the bottle into the hole.
2. Insert the tube into the pH Down Bottle and tighten the cap.
3. Cultivators pH Dosing Line

- Press MENU, SET RESERVOIR, PH SENSOR then press PRIME PUMP once or twice until you see a single drop come out from the Cultivators pH Dosing Line. Refer to the photograph above.

4. Install and calibrate the pH sensor

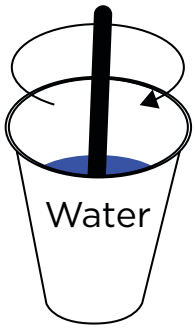
To enter the pH calibration screen, press MENU, Set RESERVOIR, pH SENSOR, CALIBRATE

1 Attach The pH Sensor Cable
To the Port On The Left Reservoir Wall

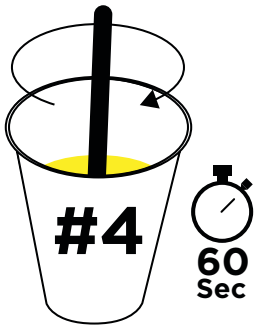


2 Fill one cup of water, one of
pH Buffer #4, and one of pH Buffer #7

3 Gently wash the pH probe
in the water and dry on a cloth



4 Gently swish the probe in pH Buffer #4
and press CALIBRATE 4



Repeat steps 3 and 4 for pH Buffer #7 Solution.

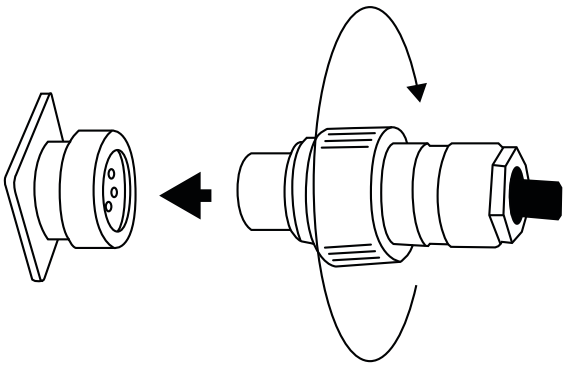
Attach PH probe to reservoir wall using suction cup.

Safely store the pH Sensor cap and use it to stop the sensor from drying out when the Cultivators Reservoir is empty. Do not let the pH Sensor dry out as it will void your warranty.

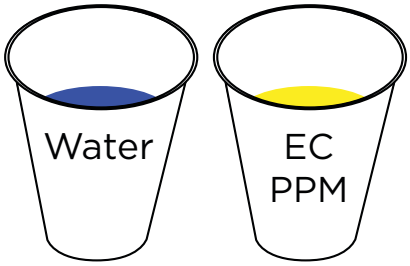
5. Install and calibrate the TDS sensor

To enter the TDS calibration screen, press MENU, Set RESERVOIR, TDS SENSOR, CALIBRATE

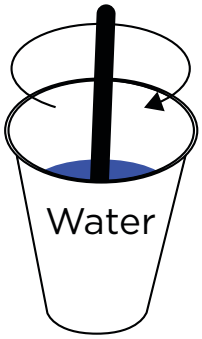
1 Attach The TDS Sensor Cable
To the Port On The Left Reservoir Wall



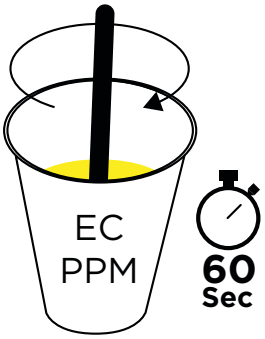
2 Fill one cup of water, and one of
EC PPM Solution



3 Gently wash the TDS probe
in the water and dry on a cloth



4 Gently swish the probe in EC PPM
Solution and press CALIBRATE TDS



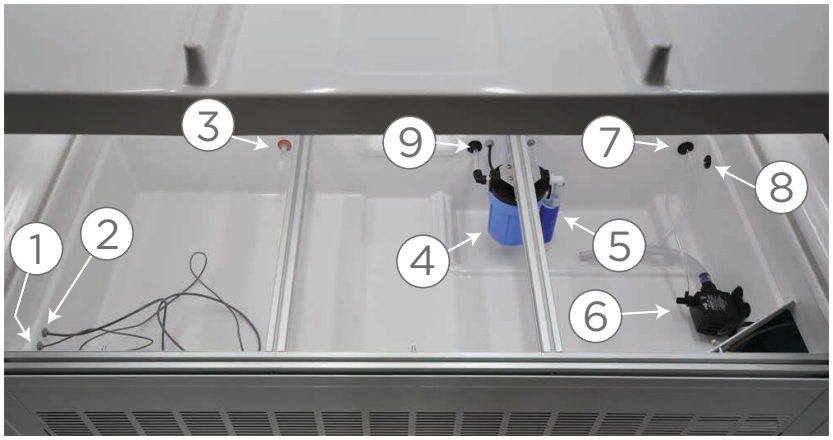
Attach TDS probe to reservoir wall using suction cup.

6. Ensure water mover/aerator is functioning

- Check that the level of water is above 50%. If there is no movement of water or air bubbles happening, grab the water mover (6 in image below) and shake out the air bubble till it starts operating.
- If there is still no movement of water or air bubbles:
  1. Clean out the intake strainer of any seeds or debris
  2. Pull off the small clear air intake line and unscrew the out take fitting
  3. Clean out any debris/seeds inside the fitting and re-screw back onto the pump and re-insert the clear tube

7. Ensure main water pump is primed

- Once reservoir is full, press MENU, SET WATER, LEVEL 4, then press . This will activate the pump.
- If water is not flowing into level 4 you will need to prime the main pump. Wait 3-5 minutes to see if the water starts flowing:
  1. Remove the water pump (5 in image below) from the clear hose that attaches the pump to the filter
  2. Once you see water flowing out of the water pump, re-attach the pump the clear hose
  3. You should now see water pumping into level 4. Turn off the watering cycle to stop the flow



1. TDS Sensor
2. pH Sensor
3. Safety Switch
4. Filter
5. Water Pump
6. Water Mover / Air Pump
7. Water Fill Line
8. Air Intake Line
9. Water Level Sensor

Planting Your Herbs and Microgreens

1 INSERT SCREEN INTO TRAY*

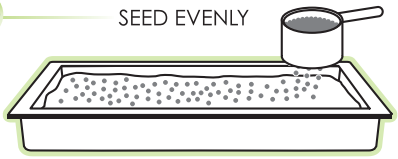
*Screen not needed for Residential OR soil free grow mat

2 CHOOSE YOUR SOIL (if using)

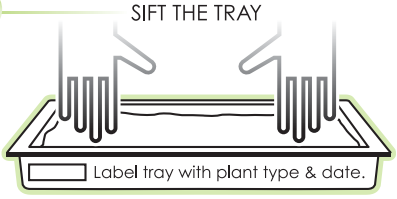
3 PUT SOIL IN TRAY AND SMOOTH

- Fill from ½ to ¾ full if using soil
- For best results, mix soil with water first

4 SEED EVENLY

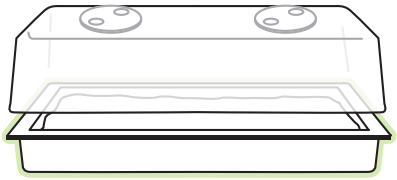


5 SIFT THE TRAY



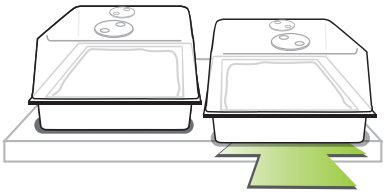
- Cover seeds with ⅛" of soil.

6 SECURE HUMIDITY DOME



- Ensure Vents Are Tightly Closed

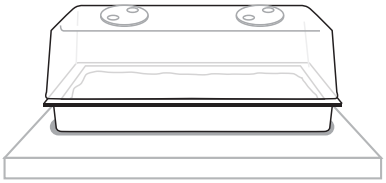
7 PLACE TRAY ON SHELF IN CULTIVATOR



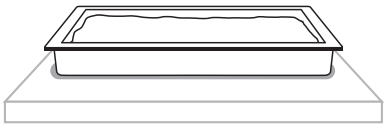
8 MANUAL WATERING & PROGRAM TRAYS

Press 💧 then set water schedule according to the seed guide.

9 LEAVE TRAY IN CULTIVATOR FOR 48 HOURS



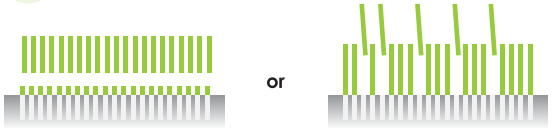
10 REMOVE HUMIDITY DOME FOR 4–6 HOURS



11 PUT THE HUMIDITY DOME BACK ON (if necessary)

12 REMOVE HUMIDITY DOME FOR REMAINING GROWING PROCESS

13 TWO WAYS TO HARVEST



Harvest all greens

or

Thin out greens and use as they grow

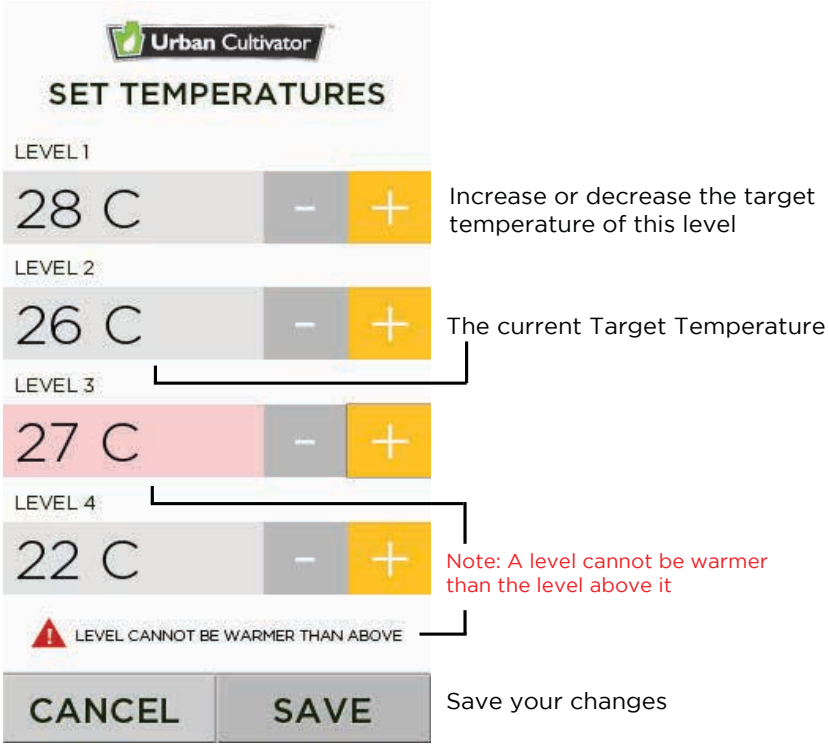
Mixing nutrients

- Your Commercial unit will tell you the amount of nutrients in your reservoir. This is the “TDS” reading on your touchscreen.
- When TDS is 0, add 160 mL of nutrients into the reservoir through the hole in the reservoir lid.
- Ideal TDS is 200 to 250. If TDS gets low, add nutrients in 60 mL increments every 15 minutes until TDS reads 200 - 250.

Customising growing conditions for each grow level

The “Set Fan” Menu

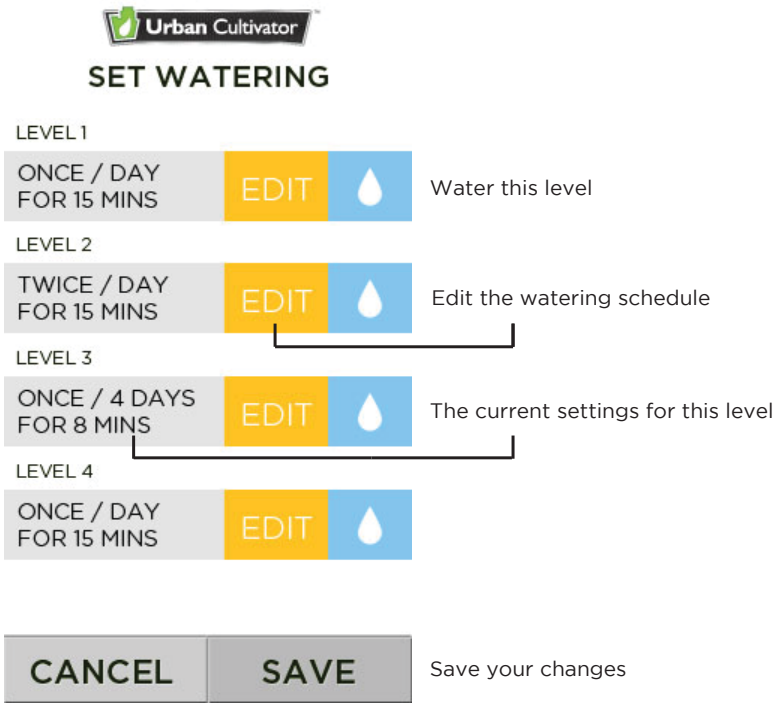
The fans are controlled by the temperature setting on your unit. Choosing a lower temperature will cause the fans to turn on more often to try and maintain that temperature. Choosing a higher temperature will cause the fans to stay off for a longer period of time.



Note: There is no heater or air conditioning in the unit. The unit’s ability to reach a set temperature depends on the temperature of your room.

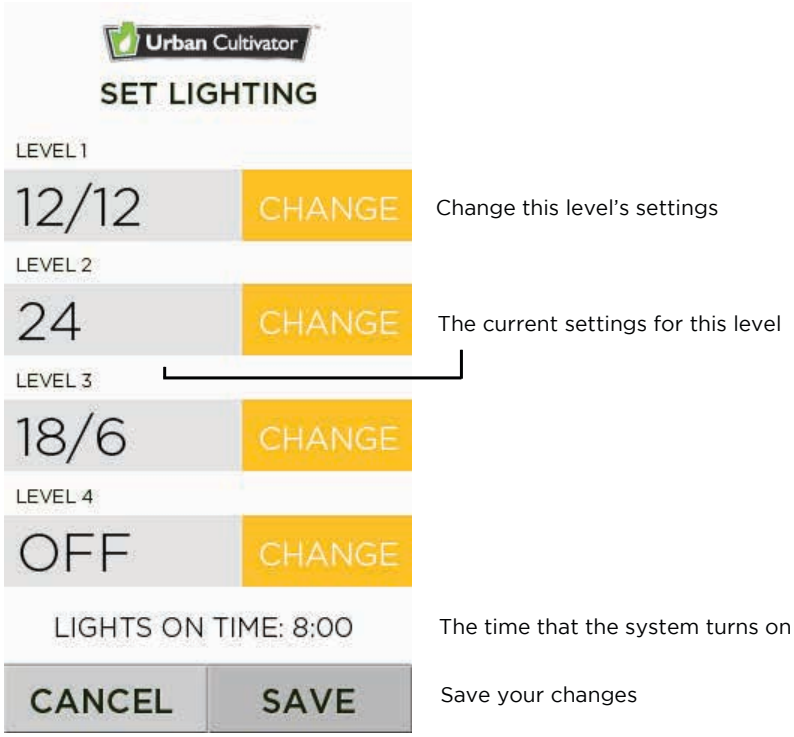
The “Set Water” Menu

You can customize the watering schedule of each level to suit your needs. We recommend not changing these settings unless you are familiar with the needs of the plants you are growing.



The “Set Lights” Menu

You can customize the lighting schedule of each level. You can set the lights to be on 12 hours per day, 18 hours per day, 24 hours per day, or to be always off.



Planting, Growing, and Cultivation Guide

Herbs & Microgreens	Seeds	Cultivaton	Watering
Malt Amaranth	2 tsp	2-3 weeks	1 per 4 days
Pepper Arugula	1 tsp	3 weeks	1 per 4 days
Bright Basil	1 tsp	5-6 weeks	1 per 5 days
Bangkok Basil	1 tsp	5-6 weeks	1 per 5 days
Crimson Beet Top	½ cup	2 weeks	1 per 4 days
Mighty Broccoli	1 tbsp	1 week	1 per 4 days
Crunchy Cabbage	1 tbsp	2 weeks	1 per 4 days
Delicate Chervil	2 tbsp	3 weeks	1 per 4 days
Mild Chives	2 tbsp	2-3 weeks	1 per 4 days
Fragrant Cilantro	¼ cup	3 weeks	1 per 4 days
Citrus Dill	1 tbsp	3 weeks	1 per 4 days
Maple Fenugreek	½ cup	2-3 weeks	1 per 4 days Soil-Free Option
Nutty Flax	1 tbsp	2-3 weeks	1 per 4 days
Power Kale	1 tbsp	2 weeks	1 per 4 days
Earthy Komatsuna	2 tsp	2 weeks	1 per 4 days
Tangy Lemon Balm	2 tsp	4 weeks	1 per 4 days
Robust Lentils	½ cup	1 week	1 per 4 days Soil-Free Option
Crisp Lettuce	1 tbsp	3 weeks	1 per 4 days
Aromatic Marjoram	1 tsp	3 weeks	1 per 4 days
Piquant Mizuna	1 tbsp	1-2 weeks	1 per 4 days
Sharp Mustard	1 tbsp	2 weeks	1 per 5 days
Wasabi Nasturtium	½ cup	1-2 week	1 per 4 days
Wild Oregano	1 tsp	3 weeks	1 per 4 days
Fresh Parsley	1 tbsp	4 weeks	1 per 4 days
Sugar Pea	1 cup	1-2 weeks	1 per 4 days
Yellow Pea	1 cup	1-2 weeks	1 per 4 days
Zesty Peppercrass	1 tbsp	2-3 weeks	1 per 5 days
Indigo Radish	3 tbsp	1 week	1 per 4 days
Spicy Radish	2 tbsp	1 week	1 per 4 days
Woodsy Sage	2 tbsp	2 weeks	1 per 4 days
Umami Savory	1 tbsp	2 weeks	1 per 4 days
Licorice Shiso	2 tsp	2-3 weeks	1 per 4 days
Tart Sorrel	2 tsp	1-2 weeks	1 per 4 days
Ruby Veined Sorrel	1 tsp	2 weeks	1 per 4 days
Hearty Sunflower	1 cup	1 week	1 per 4 days Soil-Free Option
Bold Swiss Chard	½ cup	4 weeks	1 per 4 days
Minty Thyme	2 tsp	4 weeks	1 per 4 days
Sweet Wheatgrass	1 cup	1 week	1 per 4 days Soil-Free Option

Soil-Free Option When using soil-free grow mats, change the watering cycle to “twice per day” for two days. Then, reduce watering to “once per day.”

Note: If planting multiple varieties on the same level, set watering to “once per four days.”

Note: Do not mix soil-planted and soil-free flats on the same level.

Top Growing Tips

Do Keep the Right Room Temperature and Humidity Levels

Keep your room temperature between 55°F and 90°F (13°C and 32°C), and humidity levels between 30% and 60%.

Do Keep Everything Clean

Keep your growing environment clean. Clean your reservoir, reservoir filter, and grow drawers every month, and rinse out the filter inside the grow drawers every week or two.

Don't Overwater

Don't overwater your plants, especially at the beginning of their lives, as it may bring on mould and mildew. We have factory set the watering levels for once every four days, but this will vary depending on what your ambient temperature and humidity is.

Do Use the Humidity Domes During Germination

Use the humidity domes to increase temperature and humidity in the grow trays when germinating seeds. Keep the domes on for the first two or three days after the seeds have been planted with the air vents closed. Lift domes off once per day to ensure fresh air circulation.

Do Use Proper Soil or Pads

We highly recommend the soil brands Sunshine #4 or Premiere HP. You can use other mediums, such as our Versapak fabric sheets, but we have found better results with soil.

Don't Add Too Much Nutrients

Overfeeding can cause damage to the plants listed in our Planting, Growing, and Cultivation Table. For best results refer to the instructions on the back of your nutrient bottle.

Most quick-growing microgreens (one to two weeks) do not require any nutrients. Only longer growing greens (herbs, arugula, etc) require nutrients, and should only be added after week one or two at the earliest.

Do Keep pH Levels Between 5 and 7

Balance your pH level at 5 for optimal results, as the pH will increase throughout the week.

Do Sow Seeds a Little Heavy and Thin Out Young Plants

Pluck out young plants to allow others to grow and fill out.

Do Use Hydrogen Peroxide

If you accidentally keep your humidity domes on too long or overwater your plants, and your plants develop powdery mildew, you can spray them with Hydrogen Peroxide and water (1 tbsp of 17%-35% food-grade hydrogen peroxide to 1L of water). Only spray the soil, though, as this can cause your plants to rot in on themselves

Do Love Your Plants

Take time and care with your plants. Give them the proper attention, and lift them up every now and then for weight. If your trays feel light, it's time to water your plants.

Maintenance

Cleaning the grow drawers

Clean your grow drawers between each harvest however you should immediately clean mould or unwanted organic matter.

Do not use any chemically damaging or unhealthy cleaning products such as bleach. Using chemical cleaning products may be toxic and could potentially erode the grow drawers. You can use 30% Hydrogen Peroxide to clean the reservoir and water lines (5 tsp per gallon). Read all warning labels on the H^2O^2 labels.

Keep your growing environment clean. Clean your Reservoir, Reservoir Filter and grow drawers every month and rinse out the filter inside the grow drawers every week or two weeks.

Cleaning the reservoir

1. Remove the bottom grow drawer and Reservoir Lid.

2. Press MENU, enter passcode, SET RESERVOIR, DRAIN, and ACCEPT.

3. The Cultivator will start to drain the reservoir. This can take up to 30 minutes. Once it has drained, wipe off any dirt with a clean rag

4. Add your preferred cleaning agent (H_2O_2) into the Reservoir following the guidelines on the rear of the agents packaging. The Urban Cultivator Commercial holds 80 litres of water.

5. Once clean, press MENU, SET RESERVOIR, FILL and ACCEPT.

6. Once the Reservoir has re-filled press MENU, SET RESERVOIR, LEVEL 1 and so that the cleaning agent flows through the Cultivators piping system.

7. Repeat the process for each level.

8. Once the levels and reservoir are cleaned, press RECYCLE to remove the cleaning agent and the reservoir will automatically re-fill and start over.

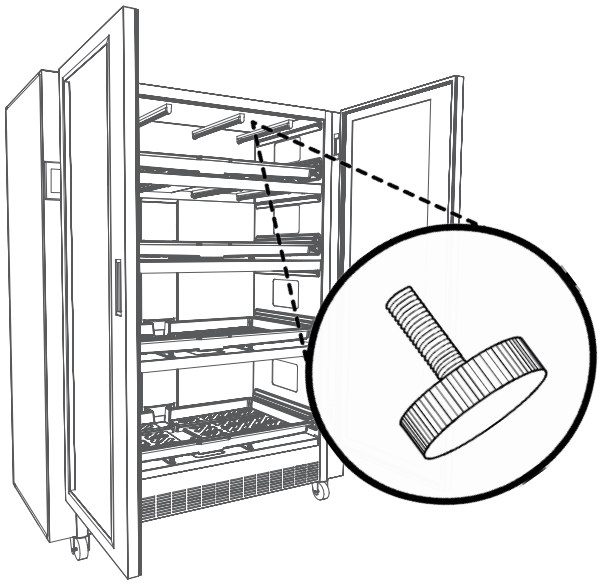
When you wipe clean the Reservoir do not knock the pumps, mis-align the Pipes and in particular the Sensors.

We recommend using a non-chlorine bleach purchased from a reputable environmentally conscience company. Please follow the quantity guidelines on its packaging.

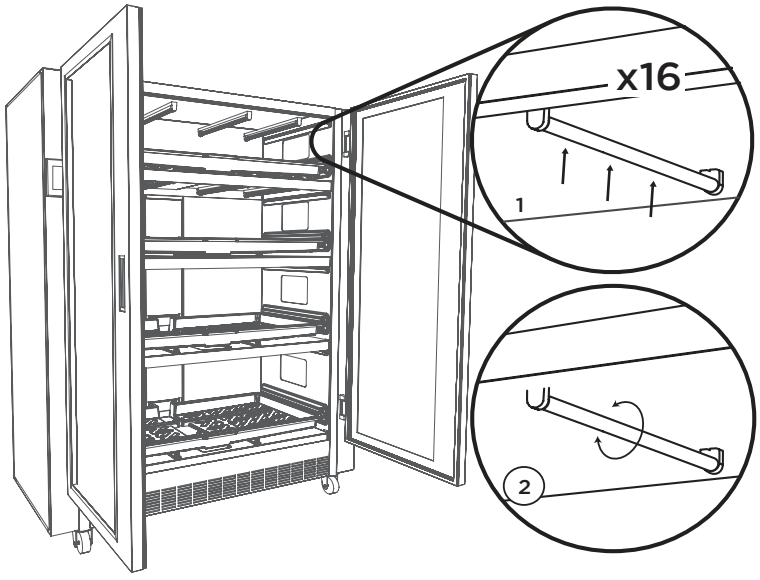
Draining the reservoir sends water down and out from the Drain Hose. Water from your Urban Cultivator Commercial is not for drinking and biological residues may still be present and could be harmful.

Installing/replacing the lights

The sixteen Grow Lights have been pre-installed in your Cultivator. To replace a grow light, follow these steps:



1. Turn black knobs located above the very top shelf of the Cultivator counter-clockwise to remove
2. Gently pull the plastic light cover out from Cultivator
3. Carefully insert each florescent tube straight into the socket
4. Gently twist lights a quarter turn to lock them in place
5. Replace the plastic light cover back, and screw back on the black knobs



Your Urban Cultivator Commercial comes with sixteen Grow Lights and 4 replacements. **Do not use UV rated lights.**

Frequently Asked Questions

How many trays will I get out of one of my seed containers?
You will get four flats out of every Urban Cultivator seed containers. You can plant heavy and thin out young plants and use as you go or plant more flats thinner and let them grow out before you harvest. Try using the shaker to sow seeds evenly.

How much soil should I put in my trays?
You should fill each tray ½ to ¾ with our recommended potting soil (Sunshine #4 and Premiere HP). ½ full for shorter life cycle (1-2 weeks) plants such as; Pea Tendrils, Wheat Grass, Sunflower, Broccoli, etc. Fill your tray ¾ full when planting longer life cycle (2-14 weeks) plants such as; Classic Herbs (basil, oregano, etc), Arugula, Beet Tops, etc.

Do I mix in my seeds or cover them with dirt?
We have found great results by covering the newly sown seeds with a light dusting of soil that's been shifted through a regular strainer. The finer soil spreads nicely and makes a protective blanket during germination. Sow your seeds over the soil and cover with a fine layer of sifted soil.

When should I use plant nutrients?
Your cultivator will display the TDS (Total Disolved Solids) of the water in the reservoir. Make note of what the TDS is when you first fill the reservoir and try to maintain a TDS of 200-250 above that number. Add 60ml of nutrients at a time and wait 15 minutes to adjust TDS.

What is the password for the child lock screen?
1821 or your own personal 4 digit password.

Is my Cultivator pre-programmed?
Yes, it comes pre-programmed for an average growing environment and an average for all plants needs. To set it to your environment or specific plant's needs check the manual, call our support line or check urbancultivator.net/videomanual

How often should I do maintenance on my cultivator?
Wet/dry shop vacuum or wipe down reservoir and levels every 6-8 weeks. Ensure to check filters and pumps for seed and soil build up. Your water pump filter will need to be changed every 6 months.

Does my water reservoir keep itself filled?
Yes, if you received your Cultivator with City Hook-up capabilities and have it plumbed in, then it is pre-programmed to exchange the water in the reservoir once a week and top up as needed.

What do I do if my reservoir won't recycle?
Check to ensure the connection on your city drain is open and free of blockage. If the cultivator is new it may not be primed and may need 2 to 3 minutes to prime. If it is still not draining, remove the bottom grow drawer to access your reservoir. Ensure there is more then 50% water inside, then reach in and make sure the pump is on and vibrating. If the pump is running, discconnect it from the clear outtake hose and ensure water is coming out of the pump.

What do I do if my level won't water?
Make sure another level is not currently being watered. Ensure that the level is set into a schedule and not in Always Off. If still no watering, get access to your reservoir and insure the pump is on and primed, as listed above.

Service and Spare Parts

Please call our toll free number 1-877-352-0490 or email support@urbancultivator.net if you think there is a problem with your Urban Cultivator Commercial.

Customer Care

In the event that your Urban Cultivator Commercial requires service, or you wish to purchase plant supplies and spare parts please call us toll free on 1-877-352-0490 or email support@urbancultivator.net.

Please provide the following information when you are calling to arrange for an engineer or return of goods:

- Your name, address, zip number or postal code.
- Your contact telephone number and best time to be reached.
- Clear and concise details of the problem.
- The purchase date and name of the sales representative who sold you the unit.

Standard Guarantee Conditions

Urban Cultivator Limited guarantee that if within 12 months (labour) or within 3 years (parts) of the date of purchase this Urban Cultivator Commercial appliance or any part thereof is proved to be defective due to faulty workmanship or materials, we will, at our option repair or replace the same FREE OF CHARGE for labour, materials or carriage on condition that:

- The Urban Cultivator Commercial has been correctly installed and used only on the electricity supply stated on the rating plate.
- The Urban Cultivator Commercial has been used in accordance to the manufacturer's instructions.
- The Urban Cultivator Commercial has not been tampered with by any person not authorised by us.
- All service work under this guarantee must be authorised by Urban Cultivator.
- Any appliance or defective component shall become the property of Urban Cultivator.
- This guarantee is in addition to your statutory and other legal rights.
- Urban Cultivator DOES NOT warranty light bulbs.

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